ABSTRACT OF THE DISCLOSURE

Methods and apparatuses to trim current limit (I_p) and frequency (f) to maintain a constant maximum power. In one aspect of the invention, a power supply regulator having a peak current limit detection threshold and an operating frequency is disclosed. The peak current limit threshold or the operating frequency are adjusted specifically to maintain the $I_p^m \cdot f^n$ product substantially constant from one power supply controller to another where m is substantially equal to 2 and n is substantially equal to 1. In another aspect of the invention, the power supply regulator has a control circuit having a control threshold current. The peak current limit threshold or the operating frequency are adjusted specifically to maintain the product of $I_p^m \cdot f^n$ divided by the control threshold current substantially constant from one power supply controller to another where m is substantially equal to 2 and n is substantially equal to 1.